

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

Listing of Claims:

1. (Currently Amended) A method for scheduling maintenance on a piece of equipment, comprising:

placing a metallic element having a test portion and a reference portion in an environment in which the piece of equipment is located;

determining the amount of corrosion experienced by the metallic element by measuring the resistance of the test portion and the reference portion; and

correlating the amount of corrosion with a maintenance schedule for the piece of equipment; and

enabling adjustment of a timing of a predetermined maintenance schedule based on the correlated amount of corrosion.

2. (Original) The method according to claim 1, wherein determining the amount of corrosion includes periodically measuring the corrosive rate of the metallic element.

3. (Original) The method according to claim 2, wherein measuring the corrosive rate of the metallic element is performed daily.

4. (Original) The method according to claim 2, wherein the amount of corrosion is compared to an expected amount of corrosion, and a resulting comparison result of the amount of corrosion and the expected amount of corrosion is used to determine the maintenance schedule for the equipment.

5. (Original) The method according to claim 1, wherein determining the amount of corrosion experienced by the metallic element is validated based on conditions of the environment.

6. (Original) The method according to claim 5, wherein the conditions of the environment comprise the temperature of the environment.

7. (Original) The method according to claim 5, wherein the conditions of the environment comprise the humidity of the environment.

8. (Currently Amended) A system for scheduling maintenance on equipment, comprising:

a metallic element having a test portion and a reference portion, the metallic element to be placed in an environment in which a piece of equipment is located;

a measuring and data storing device configured to measure the resistance of the test portion and the reference portion; and

a computer configured to determine the amount of corrosion experienced by the metallic element based on the resistances measured by the measuring and data storing device and to correlate the amount of corrosion with a maintenance schedule for the piece of equipment, and to enable adjustment of a timing of a predetermined maintenance schedule based on the correlated amount of corrosion.

9. (Cancelled)

10. (Previously Presented) The system according to claim 8, wherein the computer calculates a corrosion rate periodically based on the resistance of the test portion and the resistance of the reference portion.

11. (Original) The system according to claim 10, wherein the computer calculates the corrosion rate daily.

12. (Previously Presented) The system according to claim 8, wherein the computer compares the amount of corrosion to an expected amount of corrosion, and a comparison result of the amount of corrosion and the expected amount of corrosion is used to determine a delay of maintenance for the piece of equipment.

13. (Original) The system according to claim 12, wherein the computer uses the comparison result of the amount of corrosion and the expected amount of corrosion to perform a table look-up to determine the delay of maintenance for the equipment.

14. (Original) The system according to claim 8, wherein the computer validates the amount of corrosion experienced by the metallic element based on conditions of the environment.

15. (Previously Presented) The system according to claim 14, wherein the conditions of the environment comprise the temperature of the environment.

16. (Previously Presented) The system according to claim 15, wherein the conditions of the environment comprise the humidity of the environment.

17. (Previously Presented) The system according to claim 8, wherein the metallic element is formed from carbon steel.

18. (Previously Presented) The method according to claim 2, wherein the corrosion rate is calculated based on the resistance of the test portion and the reference portion.

19. (New) The system of claim 8, wherein the metallic element is composed of a material that corrodes substantially faster than the piece of equipment.

20. (New) A method for scheduling maintenance on a piece of equipment, comprising:

placing a metallic element having a test portion and a reference portion in an environment in which the piece of equipment is located;

determining the amount of corrosion experienced by the metallic element by measuring the resistance of the test portion and the reference portion; and

correlating the amount of corrosion with a maintenance schedule for the piece of equipment, wherein determining the amount of corrosion experienced by the metallic element is validated based on conditions of the environment.

21. (New) A system for scheduling maintenance on equipment, comprising:

a metallic element having a test portion and a reference portion, the metallic element to be placed in an environment in which a piece of equipment is located;

a measuring and data storing device configured to measure the resistance of the test portion and the reference portion; and

a computer configured to determine the amount of corrosion experienced by the metallic element based on the resistances measured by the measuring and data storing device and to correlate the amount of corrosion with a maintenance schedule for the piece of equipment, wherein determining the amount of corrosion experienced by the metallic element is validated based on conditions of the environment.